

REMARKS

Reconsideration and allowance of the subject application, in view of the following remarks, are respectfully requested.

35 U.S.C. §103

Claims 1, 3, 5-7, 9-13, 16-18, 56, 58, 60-62 and 64-66 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sano et al. (A. Sano, Y. Miyamoto, T. Kataoka, H. Kawakami and K. Hagimoto, "10/Gbit/s, 300km repeaterless transmission with SBS suppression by the use of the RZ format", Electron. Lett. Vol. 30, 1994, pages 1694-1695, hereinafter "Sano") combined with Joyce et al. (G.R. Joyce and R. Olshansky, "Multichannel 64-QAM transmission in AM/digital and all-digital hybrid-fiber-coax based video dial-tone systems", IEEE J. on Selected Areas in Communications, vol. 14, pages 1062-1065, (August 1996)), hereinafter "Joyce").

The Official Action correctly acknowledges that Sano "does not specifically disclose that the system comprising (sic) an amplitude adjustment mechanism configured for selectively adjusting a depth of said periodic modulation of the intensity of said optical signal." *Official Action dated December 2, 2008 ¶ 2, page-3*. It is argued, however, that

"Joyce discloses to selectively adjust a depth of a periodic modulation of the intensity of an optical signal (fig. 5 and corresponding descriptions)." *Official Action dated December 2, 2008 ¶ 2, page-3*.

The Examiner's characterization of Joyce is entirely incorrect.

In Joyce many video *data signals* are subcarrier *multiplexed in the electrical domain* and the *multiplexed electrical signal* modulates a *single (only one) DFB laser*. See FIG. 1 and page 1063, left column, section entitled "Experiment". The OMD referenced in Joyce is the equivalent modulation index *of the group of subcarrier multiplexed video data channels*. See page 1063,

right column, first full paragraph. Clearly, Joyce is describing varying the equivalent modulation index of *a group* of multiplexed *electrical data signals* used to modulate a *single laser*.

Joyce does not even remotely teach or suggest to *adjust the depth of a periodic modulation imparted on a data modulated signal at the data modulation frequency*, as recited independent claims 1 and 56. Joyce involves modulating a single laser with *many multiplexed electrical video data signals*, and *none of the data signals are periodic* (i.e. electrical signals are modulated with the video data which is understood to be non-periodic). There is simply nothing in Joyce that teaches to adjust the depth of a periodic modulation of the intensity of an optical signal.

Clearly, therefore, the combination of references fails to teach or suggest all the limitations of independent claims 1 and 56. There is no combination of these references that one could make to achieve the claimed invention. The claimed invention could not, therefore, have been obvious from the cited references at the time it was made.

For at least the foregoing reason, Applicant respectfully submits that independent claims 1 and 56 could not have been obvious over Sano combined with Joyce at the time the invention was made. Claims 12 and 66 have been cancelled without prejudice. Claims 3, 5-7, 9, 10, 11, 13, 16-18, 58, 60-62 and 64-65 depend, either directly or ultimately, from claims 1 or 56, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims 1, 3, 5-7, 9-13, 16-18, 56, 58, 60-62 and 64-66 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce be withdrawn upon reconsideration.

Claims 14-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sano in view of Joyce, and in further view of Applicants admitted prior art. Claims 14-15 depend from claim 1, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims 14-15 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce and Applicant's admitted prior art be withdrawn upon reconsideration.

Claims 2, 4, 37-45, 57, 59, 74-86 and 88-99 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sano in view of Joyce and Meissner et al. (U.S. Patent No. 5,060,311, hereinafter "Meissner").

As discussed above, there is nothing in any of the cited references that teaches or suggest to adjust the depth of a *periodic modulation imparted on a data modulated signal at the data modulation frequency*, as recited in independent claim 74. Meissner does not provide the missing teachings, and is not cited as providing the missing teachings. Accordingly, for at least the reasons adduced above relative to claims 1 and 56, claim 74 could not have been obvious at the time it was made in view of Sano combined with Joyce and Meissner. Claim 84 has been cancelled without prejudice. Claims 2, 4, 37-45, 57, 59, 75-83, 85, 86 and 88-89 depend either directly or ultimately, from claims 1, 56 or 74, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims 2, 4, 37-45, 57, 59, 74-86 and 88-99 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce and Meissner be withdrawn upon reconsideration.

Claims 20, 22-27 and 69-72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sano in view of Joyce and Kitajima et al. (U.S. Patent No. 5,515,196, hereinafter "Kitajima"). Claims 20, 22-27 and 69-72 depend from either claim 1 or 56, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims 20, 22-27 and 69-72 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce and Kitajima be withdrawn upon reconsideration.

Claims 46-50 and 90-98 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sano in view of Joyce, Meissner and Kitajima. Claims 46-50 and 90-98 depend from claims 1, 56 or 74, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims

46-50 and 90-98 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce, Meissner and Kitajima be withdrawn upon reconsideration.

Claims 21 and 68 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sano in view of Joyce, Kitajima and Takayama et al. (K. Takayama et al., "An all-optical 10-GHz LD-based clock regenerator using a Mach-Zehnder interferometer-type NRZ-RZ converter", Tech digest of ECOC '91, vol. MoC1-2, pp. 77-80, September 1991, hereinafter "Takayama"). Claims 21 and 68 depend from claims 1 and 56, respectively, and are allowable over the cited references by virtue of their dependency, as well as for their own recitations. Applicant respectfully requests, therefore, that the rejection of claims 21 and 68 under 35 U.S.C. §103(a) as being unpatentable over Sano combined with Joyce, Kitajima and Takayama be withdrawn upon reconsideration.

It is respectfully submitted that the present application is in condition for allowance. Applicants therefore respectfully request entry of the amendment and allowance of the application. In the event that the Examiner disagrees, Applicants request an Advisory Action as to the reasons for disagreement and entry of the present amendment since it places the application in a better condition for appeal.

If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603.668.6560.

In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

Respectfully submitted,

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